Work Orde	er ID 99 2:55:50 PM		15	*991	186*	,						Page 1
Revision ID:	D3953-15 Gas Spring Br		39 ⁵³ -15 899186	Accept	*N900	040	100)*	Setup	Start Stop	14.	S1* S2*
Start Date: Required Date: Reference:	3/27/13 3/27/13	Start Qty: 12.00 Req'd Qty: 12.00	*12* *12*		Cust Item I Customer:	D:						. • • • • • • • • • • • • • • • • • • •
Approvals:			Date: 13-04-02			ate:			Run	Start Stop		R1* R2*
Sequence ID/ Work Center II)	Operation Description		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Rej Qty	•	Reject Number	Insp. Stamp
Draw Nbr	Rev	ision Nbr										
*100 *100*				0.00				2 6				Jm3-11-6
Waterjet FLOW CNC Waterjo		Memo 1-Cut as per Dwg Rev:_ Prog Rev:_	Dwg D3953	0.00						.		<u> </u>
		2-Deburr if	necessary									·
*110 *110*		QC2- Inspect parts off n	nachine FAI/FAIB	0.00				26	^			Jan 3 - 11-
QC Quality Control		Memo		0.00				=				<u> </u>

											DQA:	Date:	
NCR:	Yes	/ No				WORK ORDER NON-C	O	VFORI	MANCE / UPD	DATE	QA Closed:	Date:	
						T			-				
Work Ord	or.					DISPOSITION				AGAINST DE	PARTMENT,	/PROCESS	
Part I	No					Rework Scrap Use-as-is Work Order Update			Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite	ł	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
NCR I	NO.					work Order Opdate	J		Large Pau	Composite	I	5uppliet	.
Root					Descri	ption of work order update	1	nitial	Acti	ion	Sign &		
Cause		Date	Step	Qty		or Non-conformance	Ch	ief Eng	Descri	iption	Date	Verification	QC Inspector
Doc/Data	Ш				1								
Equip/Tooling	Ш				1						ļ		
Operator	Ш			ļ			Ì						
Material	Ш												
Setup	Ш												
Other													
Process													
Supplier													
Training									,				
Unapproved	Ш										<u> </u>	<u> </u>	
						F	AUI	T CATE	GORY				
Land	ing G	Gear				General		1			٦	_	-
		Bending				Bend		Grain			Ovalized		Pressure/Forced
		Centre N	ot Conce	ntric to	o/s	BOM/Route	<u>_</u>	Hardwa	are		Over/Under	-	Temperature/Cure
		Cracks				Broken/Damaged	L.	4	ion Incomplete		Part Incorre	·	Weld
		Crushed/	Crimped	-		Burrs		Instruc	tions Incomplete/L	Jnclear	Part Lost/M	issing	Wrong Stock Pulled
		Cuffs				Contamination		Maint	enance		Part Moved		
		Heat Trea	at			Countersink		Mislab	eled		Positioned \	Wrong	

Misread

Out of Calibration

Out of Sequence

Outside Dimensions

Offset

Other

Power Loss/Surge

Ripples in Bend

Turning Sequence

Wave/Twist in Tube

Inspection Strip in Tube

Torque Waves in Extrusion

Cut Too Short

Drill Holes

Drawing

Finish

Folio

· · · · · · · · · · · · · · · · · · ·													
Work Ordo March-28-13 12		186			*991	86*							Page 2
Item ID: Revision ID: Item Name:	D3953-15 Gas Spring B	racket			Accept	*N900)040	100)*	Setup S	Start Stop	*N: *N:	S1* S2*
Start Date: Required Date: Reference:	3/27/13 3/27/13	Start Qty: 12.00 Req'd Qty: 12.00		*12* *12*		Cust Item Customer:			٠.				
Approvals:	Process Pla	an:	Date:		Tooling:	D	Pate:				Start	*N	R1*
	QC:		Date:		SPC (Y/N):	D)ate:				Stop	*N	R2*
Sequence ID/ Work Center II	D	Operation Description			Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Rejec Qty		Reject Number	Insp. Stamp
120		QC8- Inspect parts - secon	nd check		0.00 DAS				~ /				
120 QC Quality Control		Memo			0.00 B 13°C	ما		(Com				
120					0.00								,
*130 *130*					0.00				20				12/
Small Fab		Memo			0.00			0	×6×	····			DINK

140

QC5- Inspect part completeness to step on W/O

1- CHAMFER HOLE AS PER DWG

2- DEBURR IF NECESSARY

Memo

Memo

0.00

140

Small Fab

Quality Control

Engineering Quality Other
QC Inspector

FAULT CATEGORY General **Landing Gear** Pressure/Forced Bend Grain Ovalized Bending Temperature/Cure BOM/Route Hardware Over/Under tolerance Centre Not Concentric to O/S Weld Part Incorrect Broken/Damaged Inspection Incomplete Cracks Wrong Stock Pulled Part Lost/Missing Crushed/Crimped. Instructions Incomplete/Unclear Burrs Maintenance Part Moved Cuffs Contamination Positioned Wrong Mislabeled Heat Treat Countersink Power Loss/Surge Other Misread Inspection Strip in Tube Cut Too Short Drill Holes Offset Ripples in Bend Drawing Out of Calibration Torque Waves in Extrusion Turning Sequence Finish Out of Sequence Folio Outside Dimensions Wave/Twist in Tube

Process
Supplier
Training
Unapproved

Work Ord		9186	*99186*									Page 3		
Item ID: Revision ID: Item Name:	D3953-15 Gas Spring B	Bracket			Accept	*N900	040	100)* Se	etup	Start Stop		S1* S2*	
Start Date: Required Date Reference:	3/27/13 e: 3/27/13	Start Qty: 12.00 Req'd Qty: 12.00		*12* *12*		Cust Item I Customer:	D:							
Approvals:	Process Pl	an:	Date:		Tooling: SPC (Y/N):		ate:		Rı	un	Start Stop	*N *N	R1* R2*	
Sequence ID/ Work Center	ID	Operation Description Identify as per dwg & Sto	ck Locatio	n:8707	Set Up/ Run Hours	Tool ID	Tool#	Plan Code	Accept Qty	Rejo Qty		Reject Number	Insp. Stamp	
150 Packaging Packaging		Memo		·	0.00				261			<u>'</u>	DAS 26 9-89	

160

QC21- Final Inspection - Work Order Release

0.00

160

Memo

0.00

Quality Control

/3/11/14 H

									DQA:	Date:	
NCR: Yes	s / No				WORK ORDER NON-C	ONFOR	MANCE / UP		QA Closed:	Date:	
Work Order:					DISPOSITION			AGAINST DE	PARTMENT	/PROCESS	
Work Order.					Rework		Skid-tube	Crosstube		Water Jet	Engineering
Part No		<u>.</u>		<u>.</u>	Scrap Use-as-is	Ther	Machining moforming	Small Fab Finishing	1	d. Eng. Coor.	Quality Other
NCR No					Work Order Update		Large Fab	Composite		Supplier	
Root				Descri	ption of work order update	Initial	Ad	ction	Sign &		
Cause	Date	Step	Qty	. (or Non-conformance	Chief En	g Desc	cription	Date	Verification	QC Inspector
Doc/Data											
Equip/Tooling											
Operator		1									
Material											
Setup											
Other						<u> </u>					
Process											
Supplier		1									
Training											
Unapproved	7										
					FA	AULT CAT	EGORY				

Landing C	Gear	General		_	 _	 _
	Bending	Bend	Г	Grain	Ovalized	Pressure/Forced
	Centre Not Concentric to O/S	BOM/Route		Hardware	Over/Under tolerance	Temperature/Cure
	Cracks	Broken/Damaged		Inspection Incomplete	Part Incorrect	Weld
	Crushed/Crimped.	Burrs		Instructions Incomplete/Unclear	Part Lost/Missing	Wrong Stock Pulled
	Cuffs	Contamination		Maintenance	Part Moved	
	Heat Treat	Countersink		Mislabeled	Positioned Wrong	 _
	Inspection Strip in Tube	Cut Too Short		Misread	Power Loss/Surge	Other
	Ripples in Bend	Drill Holes		Offset		
	Torque Waves in Extrusion	Drawing		Out of Calibration		
	Turning Sequence	Finish		Out of Sequence		
	Wave/Twist in Tube	Folio		Outside Dimensions		

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Picklist Print

March-28-13 12:55:50 PM

Work Order ID:

99186

Parent Item:

D3953-15

Parent Item Name:

Gas Spring Bracket

Start Date: 3/27/13

Required Date: 3/27/13

Page 1

Start Qty: 12.00

Required Qty: 12.00

Comments:

IPP RevA: New issue DD verified by:EC

by:EC

IPP Rev:B as per dwg revC DD 10.03.02 verified

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304S11GA		Purchased	No	····		100	sf	213.0300	0.0197	0:2488416	,		
304/316 0.125 Sheet										0.5		J~	<u>113-11-</u> 6

Location		Loc Qty	Loc Code	
MAT020		213.03		
122521	•	30.03		
24445		183		

126075

126075

											DQA:	Date:	
NCR:	Yes	/ No				WORK ORDER NON-C	CON	FOR	MANCE / UP				
											QA Closed:	Date:	
Work Ord	or.					DISPOSITION				AGAINST DE	PARTMENT	PROCESS	
WOIK OIG	e i .					Rework	1		Skid-tube	Crosstube		Water Jet	Engineering
Part I	Vo.					Scrap	1		Machining	Small Fab	Pro	d. Eng. Coor.	Quality
, , , , ,	-					Use-as-is	1		noforming	Finishing		re/Packaging	Other
NCR I	No.					Work Order Update	1		Large Fab	Composite		Supplier	
	•												
Root					Descri	ption of work order update	Ti	nitial	Ac	tion	Sign &		
Cause		Date	Step	Qty		or Non-conformance	Chi	ef Eng	Desc	ription	Date	Verification	QC Inspector
Doc/Data													
Equip/Tooling	Ш]		[
Operator	Ш												
Material	Ш				İ								
Setup	Щ								l				
Other	Ы												
Process	Н												
Supplier	Н		1										
Training	Н												
Unapproved			l		<u> </u>		ALII.	T CATE	GORV		1	1	
Landi	na G				 	General	AOL	CAIL					
Lattu	L L	Bending			Г	Bend	\Box	Grain			Ovalized		Pressure/Forced
]	H	Centre N	ot Conce	ntric to		BOM/Route	\vdash	Hardwa	are	 	Over/Under	tolerance	Temperature/Cure
	H	Cracks	01 0011001		-," -	Broken/Damaged	-		ion Incomplete	-	Part Incorre	-	Weld

Instructions Incomplete/Unclear

Maintenance

Out of Calibration

Out of Sequence

Outside Dimensions

Mislabeled

Misread

Offset

Wrong Stock Pulled

Other

Part Lost/Missing

Positioned Wrong

Power Loss/Surge

Part Moved

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Crushed/Crimped.

Inspection Strip in Tube

Torque Waves in Extrusion

Cuffs

Heat Treat

Burrs

Contamination

Countersink

Cut Too Short Drill Holes

Drawing

Finish

Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

DART AEROSPACE LTD	Work Order:	99186
Description: Gas Spring Bracket	Part Number:	D3953-15
Inspection Dwg: D3953 Rev: C		Page 1 of 1

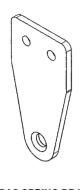
FIRST ARTICLE INSPECTION CHECKLIST

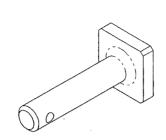
X First Article Prototype

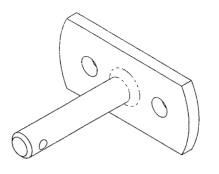
Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø0.194	+0.005/-0.001	0.195	_		V	Jamoi
Ø0.257	+0.006/-0.001	0.259	-		J	
0.375	+/-0.010	6,370	_		V	
0.625	+/-0.010	0.637,			٧	
1.38	+/-0.030	1.384"	i		V	
0.38	+/-0.030	0.3%5	1		V	
1.00	+/-0.030	1.00	_		V	
1.686	+/-0.010	1.690"	į		ν	
2.06	+/-0.030	2.066	_		٧	
0.125	+/-0.010	0.16	-		V	
			DA:	3		

Measured by: 3m	Audited by:	9-89	Prototype Approval:	N/A
Date: (3-11-6	Date:	B-11-06	Date:	N/A

Rev	Date	Change	Revised by	Approved
Α	09.10.22	New Issue	KJ , ,	
В	09.12.14	Dwg Rev updated	KJ 9	187











D3953-1 GAS SPRING BRACKET (FULL LID)

D3953-3 GAS SPRING STUD, LID

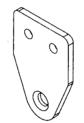
D3953-5 GAS SPRING STUD, BASE

D3953-7 GAS SPRING SPACER

D3953-9 GAS SPRING WASHER











D3953-11 GAS SPRING SPACER

 $\frac{\text{D3953-13 GAS SPRING SPACER}}{\text{(FULL LID)}}$

D3953-15 GAS SPRING BRACKET (SPLIT LID)

 $t = t, \xi, \xi, \xi$

D3953-17 GAS SPRING SPACER (SPLIT LID)

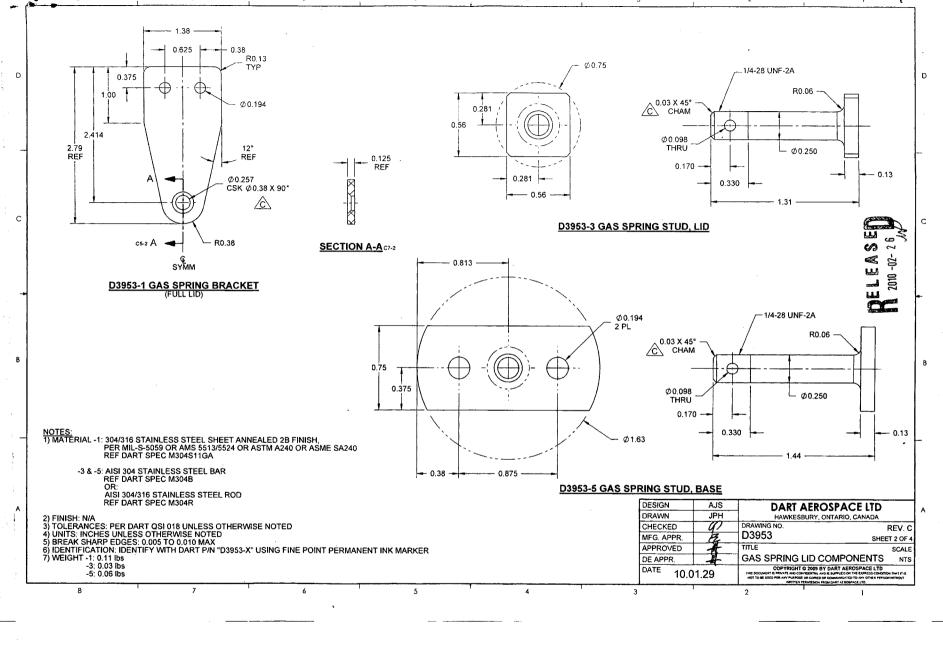
D3953-19 GAS SPRING BRACKET (SQUARE BASKET)

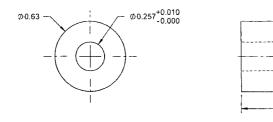


D3953-21 GAS SPRING BRACKET (SQUARE BASKET) <u></u>

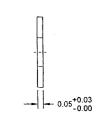
99186 MCJ 13-04-02

•		<u>\$</u>	,	
			JPH	10.01.29
SHEET DIMENS REASOI ASSY.	3 ZONE C1, DII BIONS MIN/MA) N: DIFFICULTY	M 0.05 MIN WAS 0.13, MULTIPLE K REMOVED TOLERANCE ADDED. INSTALLING COTTER PIN AT NEXT	AJS	09.11.11
NEWIS	SUE		AJS	09.07.27
		DESCRIPTION	BY	DATE
١	AJS	DART AFROSPA	CFU	D
1	JPH			-
ED	a	DRAWING NO.		REV. C
PPR.	E	7 D3953		SHEET 1 OF 4
VED	#.	TITLE		SCALE
R.	#	GAS SPRING LID COMF	ONEN	TS NTS
10.0	1.29	THIS DOCUMENT IS PRIVATE AND CONFERENTIAL AND IS SUPPLIED NOT TO BE USED FOR ANY PURPOSE OR COMED OR CONSEUNCE	ON THE EXPRESS	CONDITION THAT IT IS
	SHEET DIMENS REASON ASSY. NEW IS FED PPR. VED PR.	HEET 3 ZONE C1 DI DI DIMENSIONS MINIMA REASON DIFFICULTY ASSY. NEW ISSUE A JS JPH ED PPR. VED A PARTS -19 & -21 ADDED (SHT 1& 4): CSK CALLOUT WAS CHAM (66-2, B6-3, C6-4): © SYMM WAS © SYM ABOUT (67-2, C7-4): SECTION C-6 REPOSITIONED TO B2-4 REASON: ADDL PARTS REDO; DRAFTING ERRORS SHEET 3 ZONE C1 DIM OJS MIN WAS 0.13; MULTIPLE DIMENSIONS MINMAX REMOVED TOLERANCE ADDED. REASON: DIFFICULTY INSTALLING COTTER PIN AT NEXT ASSY. NEW ISSUE DESCRIPTION A JS DART AEROSPA HAWKESBURY, ONTAR ED JY DRAWING NO. D3953 VED TITLE GAS SPRING LID COMPRETE TO BOOK BY DARTA TO COMPRETE TO BOOK BY TO BATT TO BOOK BY TO BE TO BE TO BE TO BE TO BOOK BY TO BE	PARTS -19 & -21 ADDED (SHT 1& 4); CSK CALLOUT WAS CHAM (66-2, 86-3, 6-4); & SYMM WAS & SYM ABOUT (67-2, 67-4); SECTION C.C. REPOSITIONED TO 82-4 REASON: ADDL PARTS REDD, DRAFTING ERRORS SHEET 3 ZONE C.1 DIM 90 SHIN WAS 0.13, MULTIPLE DIMENSIONS MINMAX REMOVED TOLERANCE ADDED. REASON: DIFFICULTY INSTALLING COTTER PIN AT NEXT ASSY. NEW ISSUE DESCRIPTION DART AEROSPACE LIMAWKESBURY, ONTARIO, CANALD DRAWING NO. DRAWING NO. DPR. DART AEROSPACE LIMAWKESBURY, ONTARIO, CANALD DRAWING NO. DRAWIN	

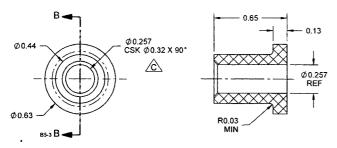




Ø0,63 Ø 0.257^{+0.010}



D3953-7 GAS SPRING SPACER



- 1.38 0.625 0.38 0.63 Ø0.194 2 PL 0.75 0.375 0.06 X 45° CHAM TYP <u>&</u>

D3953-11 GAS SPRING SPACER

SECTION B-B 87-3

0.37 +0.00

D3953-13 GAS SPRING SPACER

D3953-9 GAS SPRING WASHER

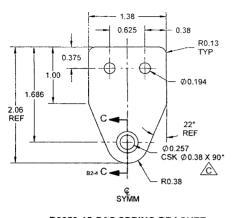


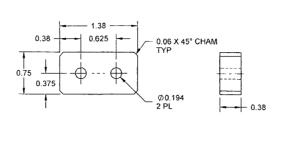
NOTES:	
1) MATERIAL -7,-9 & -11: DELRIN II 150E OR ACETRON GP ACETAL, BL	ack
REF DART SPEC M-DELRIN-R	

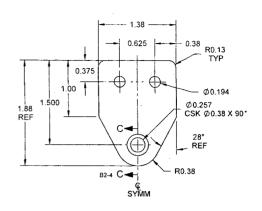
- -13: AISI 304 STAINLESS STEEL BAR REF DART SPEC M304B

- 2) FINISH: N/A
 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 6) IDENTIFICATION -13 ONLY: IDENTIFY WITH DART P/N "D3953-13" USING FINE POINT PERMANENT INK MARKER
 7) WEIGHT -7/-9/-11: < 0.01 lbs EACH
 -13: 0.17 lbs

DESIGN	AJS	DART AEROSPACE LTD	
DRAWN	JPH	HAWKESBURY, ONTARIO, CANADA	
CHECKED	9	DRAWING NO.	REV. C
MFG. APPR.	3	D3953 SHEE	T 3 OF 4
APPROVED	15	TITLE	SCALE
DE APPR.	#	GAS SPRING LID COMPONENTS	NTS
DATE 10.01.29		COPYRIGHT 6 2009 BY DART AEROSPACE LTD THIS DOCHMENT IS STANLED CONTRIGHTER, AND IS SHAWN, BUT THE STANLED CONTRIGHTER IN HOT TO BE USED AND ANY PHIFFCES ON COPERO ON CONTRIGHTED TO ANY OTHER PERSON WITHOUT WITH THE PERSON WITHOUT STANLED AND ANY CONTRIVE PERSON WITHOUT STANLED AND ANY CONTRIGHTER PERSON WITHOUT STANLED AND ANY CONTRIGHTER TO THE PERSON WITHOUT STANLED AND ANY CONTRIGHT.	



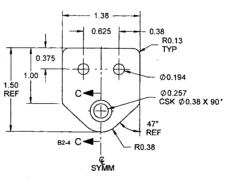




D3953-15 GAS SPRING BRACKET (SPLIT LID)

D3953-17 GAS SPRING SPACER (SPLIT LID)

D3953-19 GAS SPRING BRACKET (SQUARE BASKET) <u>(c)</u>



0.125 REF

D3953-21 GAS SPRING BRACKET (SQUARE BASKET)

<u>C</u>

SECTION C-C C7-4 C22-4 B4-4 RELEASE, R 2010 -02- 2-6

NOTES: 1) MATERIAL -15/-19/-21: 304/316 STAINLESS STEEL SHEET ANNEALED 2B FINISH, PER MIL-S-5059 OR AMS 5513/5524 OR ASTM A240 OR ASME SA240 REF DART SPEC M304S11GA -17: AISI 304 STAINLESS STEEL BAR REF DART SPEC M304B

2) FINISH: N/A

2) FINISH: N/A
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3953-X" USING FINE POINT PERMANENT INK MARKER
7) WEIGHT -15: 0.08 lbs
-19: 0.07 lbs
-19: 0.07 lbs
-21: 0.08 lbs -

D

-21: 0.06 lbs

DESIGN	AJS	DART AEROSPACE LTD	
DRAWN	JPH	HAWKESBURY, ONTARIO, CANADA	
CHECKED	D	DRAWING NO.	REV. C
MFG. APPR.	8	D3953 SHEE	T 4 OF 4
APPROVED	#	TITLE	SCALE
DE APPR.	-#-	GAS SPRING LID COMPONENTS	NTS
DATE 10.01.29		COPYRIGHT © 2009 BY DART AEROSPACE LTD THIS DOCUMENT IS TREVIOLE AND COMPRETED AND ENSURED OF THE MEMBER OF THE PROPERTY OF THE THE PROPERTY OF THE PROPERTY	